REMARKS/ARGUMENTS

Claims 18-29, 33-42 and 46-57 are pending in the application.

Claims 18-29, 33-42 and 46-57 have been rejected.

Claims 26-29, 39-42 and 54-57 have been objected to as dependent from a rejected claim.

Reconsideration of the Claims is respectfully requested.

1. In the above referenced Office Action:

a. Claims 18-21, 25, 33, 34, 38, 46-49, and 53 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6307844 to Tsunehara et al. ("Tsunehara"), in view of U.S. Patent No. 5,694,391, to Diachina et al. ("Diachina");

b. Claims 22-24, 35, 36, and 50-52 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunehara, in view of in view of Diachina, further in view of U.S. Patent No. 5,548616, to Mucke et al. ("Mucke"); and

c. Claims 26-29, 39-42 and 54-57 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The rejections and objections have been traversed and, as such, the applicant respectfully requests reconsideration of the allowability of claims 18-29, 33-42 and 46-57.

2. Rejection under Section 103

Claims 18-21, 25, 33, 34, 38, 46-49, and 53 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6307844 to Tsunehara et al. ("Tsunehara"), in view of U.S. Patent No. 5,694,391, to Diachina et al. ("Diachina").

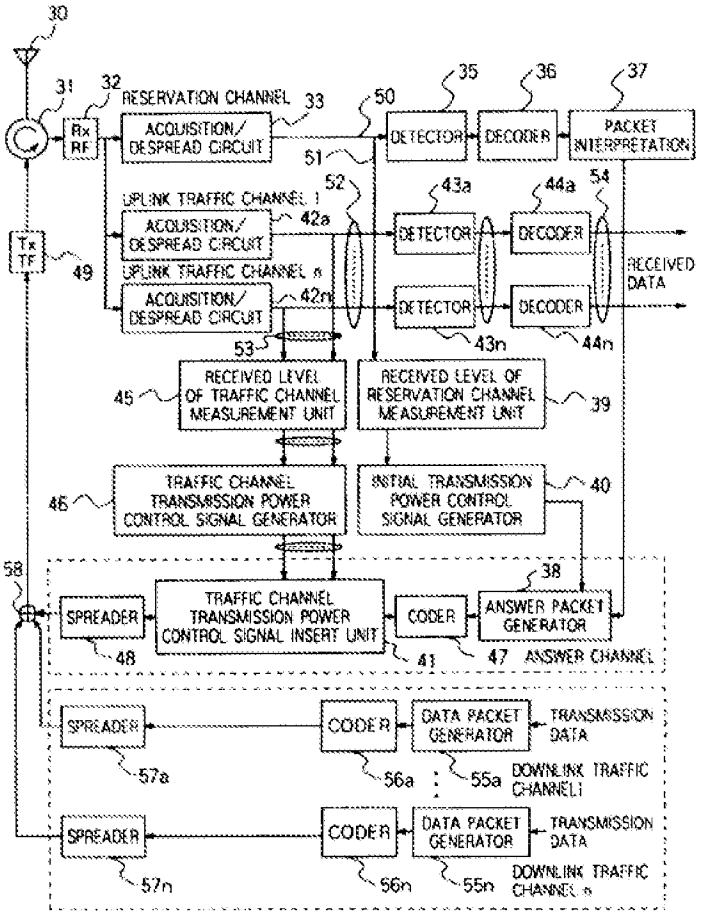
Claims 22-24, 35, 36, and 50-52 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunehara, in view of in view of Diachina, further in view of U.S. Patent No. 5,548616, to Mucke et al. ("Mucke").

Tsunehara is cited by the Office Action as "disclos[ing] . . . a base station comprising (see fig. 3, col. 4 lines 20-28); an antenna (30); a radio frequency interface

coupled to the antenna (32); . . . the base station supporting a power control channel comprising (see fig. 3, col. 4 lines 20-28); a plurality of power control bits, each power control bit corresponding to a reverse link common channel of the plurality of reverse link common channels and directing a respective subscriber unit to adjust its reverse link transmission power (see fig. 9, abstract, col. 1 lines 48-63, col. 7 lines 43-50)." (Office Action at p. 3; *see also* Office Action at pp. 5, 6).

Figure 3 of Tsunehara is recited as "a first example of the structure of a base station embodying transmission power control of the present invention:"

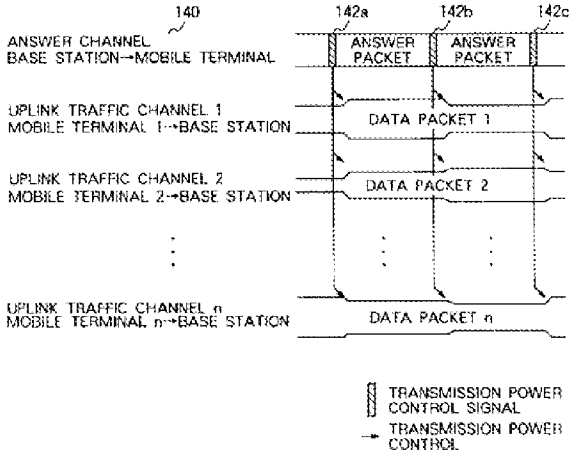
FIG. 3



(Tsunehara 3:10-12). The cited portion of Tsunehara by the Office Action recites that "Fig. 3 shows an example of the structure of a base station. A signal received by an antenna 30 is input via a circulator 31 to a reception radio module 32. The reception

radio module 32 performs a high/middle frequency reception process to demodulate a signal in a carrier frequency band into a baseband signal. Since the received signal has a plurality of multiplexed channel signals, it is input to an acquisition/despread circuit (33, 42a-42n) to be spectrum despread." (Tsunehara 4:20-28). The further portion cited by the Office Action is cited as "illustrating a transmission power control state of an uplink traffic channel realized by the operations of a base station and mobile terminals according to the present invention:"

FIG. 9



(Tsunehara 3:26-29). Tsunehara recites that "the width of a data packet is drawn to correspond to the receive level of the data packet at the base station. For example, in the uplink traffic channel 1, the mobile terminal controls the transmission power such that the transmission powers are increased, reduced, and increased in response to the reception of the common transmission power control signals 142a, 142b, and 142c." (Tsunehara 7:43-50).

For mobile station power control, Tsunehara recites that "[w]hen the base station communicates with the mobile terminal 1, it inserts transmission power control signals 132a, 132b, 132c, . . . into a downlink traffic channel 130a to the mobile terminal 1. The mobile terminal 1 changes its transmission power of the uplink transmission data in accordance with the transmission power control signal obtained from the received

channel 130a." (Tsunehara 2:7-13). In Tsunehara, the combination is provided as "[t]he answer packet and common transmission power control signal are spectrum spread by a spreader 48 for answer channel. The spectrum spread answer packet and common transmission power control signal are multiplexed with other downlinks by an adder 58, modulated from the baseband signal into a signal in the carrier frequency band by a transmission radio module 49 . . . ." (Tsunehara 6:5-12). A "transmission power correction unit 123 [of the mobile station] then derives the common transmission power control signal from a signal of the answer channel processed by the answer channel acquisition/despread circuit 63 and detector 64." (Tsunehara 7:7-10).

Tsunehara, however, does not teach or disclose power control bits that correspond to a reverse link common channel and that direct a subscriber unit to adjust its reverse link transmission power. Further Tsunehara does not teach or disclose inhibit bits that correspond to a reverse link common channel, and that indicate whether a dedicated burst mode has been scheduled for the reverse link common channel. Also, each of the power control signals of Tsunehara's common power control channel corresponds to a respectively allocated non-shared uplink traffic channel (*see* FIG. 9 of Tsunehara and related text at col 7, lines 43-49).

The Office Action concurs, in that "Tsunehara, however, does not in particular refer to a plurality of inhibit bits, each of the plurality of inhibit bits corresponding to a reverse link common channel of the plurality of reverse link common channels and indicating whether a dedicated burst mode has been scheduled for the reverse link common channel." (Office Action at p. 3).

The Office Action submits that the collision avoidance device of "Diachina . . . teaches a plurality of inhibit bits (e.g., BRI flags), each of the plurality of inhibit bits corresponding to a reverse link common channel of the plurality of reverse link common channels and indicating whether a dedicated burst mode has been scheduled for the reverse link common channel (see col. 3 lines 18-23, col. 6 lines 35-40, col. 9 lines 41-45, col. 11 lines 31-43 – where Diachina teaches using a plurality of Busy/Reserved/idle

Flags to indicate transmission access to a plurality of mobile stations on a uplink shared channel)." (Office Action at p. 4).

The cited portion of Diachina recites that "[w]hen individual channels are used as communication links on a shared basis, multiple mobile stations may either listen to or contend for the same channels. In the contending situation, each shared channel can be used by a plurality of mobile stations which compete to obtain exclusive use of the channel for a limited period of time. On the other hand, when individual channels are used as communication links on a dedicated basis, a single mobile station is assigned the exclusive use of the channel for as long as it needs it." (Diachina 3:18-27).

That is, Diachina teaches or discloses contention resolution and/or collision avoidance, not reverse link power adjustment. Diachina recites that the "[communication link] layer 2 protocol also contains a plurality of flags. Forward shared control feedback (SCF) flags are used to control transmissions on the [random access control channel (RACH)]. A busy/reserved/idle (BRI) flag is used to indicate whether its corresponding uplink RACH slot is Busy, Reserved or Idle." (Diachina 9:41-45). "Contention resolution and/or collision avoidance information is provided on the forward subchannel corresponding to any given frame sent on the [random access control channel]." (Diachina 6:37-39). When channels are used on "a shared basis, multiple mobile stations may either listen to or contend for the same channels.

Diachina does not teach or disclose a power control channel, nor does it teach or disclose power control generally, in contrast to Applicant's claims. Further, the BRI flags do not provide 'inhibit bits," but instead refer to downlink operations by the "base station, mobile telephone service center and internetworking function (BMI)." (*see* Diachina 14:15-20).

In contrast to Diachina, and as explained in Applicant's Specification, "the reverse link is strictly interference limited, that is, one user's reverse link energy at the base station receiver acts as interference to other users signals. Thus, in the typical case, a plurality of MSs transmit to the BTS simultaneously on the reverse link with each

reverse link transmission spread by a unique PN code or PN code shift." (Specification at p. 4, *ll.* 17-23).

Also, as explained in Applicant's Specification, "as usage of the CDMA cellular system increases with new packet data applications the ability to effectively use the R-ACH decreases. Another problem faced in using the R-ACH relates to the power control of transmissions on the R-ACH. The MS uses the received power of forward link transmissions to estimate the transmission power to use for reverse link transmissions (open loop power control). Based upon its estimate of the transmission power, the MS sends a transmission t the BS on the R-ACH. If the BS does not acknowledge receipt . . . , the MS increase its transmission power and retransmits. This process is repeated until the BS acknowledges the transmission or a maximum number of tries have attempted." (Specification at p. 8, *ll.* 13-26).

In this regard, Applicant's claims refer to a power control channel, in which the cited references do not teach or disclose, and/or otherwise teach away from.

For example, Applicant's Independent Claim 18 recites, *inter alia*, a "base station that supports communications . . . in a CDMA wireless communication system, the base station comprising: . . . the base station supporting a power control channel comprising: a plurality of power control bits, each power control bit corresponding to a reverse link common channel of the plurality of reverse link common channels and directing a respective subscriber unit to adjust its reverse link transmission power; and a plurality of inhibit bits, each of the plurality of inhibit bits corresponding to a reverse link common channel of the plurality of reverse link common channels and indicating whether a dedicated burst mode has been scheduled for the reverse link common channel."

Applicant's Independent claim 21 recites, *inter alia*, a "A base station that supports communications . . . in a CDMA wireless communication system, the base station comprising: . . . the base station supporting a power control channel comprising: a first power control/inhibit bit stream that corresponds to a first reverse link common channel; and a second power control/inhibit bit stream that corresponds to a second

reverse link common channel, the second power control/inhibit bit stream offset in relation to the first power control/inhibit bit stream."

Applicant's Independent Claim 33 recites, *inter alia*, a "subscriber unit that supports communications with a base station in a CDMA wireless communication system, the subscriber unit comprising: . . . the subscriber unit decoding and processing a power control signal to extract a power control bit and an inhibit bit corresponding to a common channel used by the subscriber unit, the power control signal comprises: a plurality of power control bits, each power control bit corresponding to a respective reverse link common channel of a plurality of reverse link common channels and directing a respective subscriber unit transmitting on the respective reverse link common channel to adjust its reverse link transmission power; and a plurality of inhibit bits, each of the plurality of inhibit bits corresponding to a respective reverse link common channel of the plurality of reverse link common channels and indicating whether a dedicated burst mode has been scheduled for the respective reverse link common channel."

Applicant's Independent Claim 34 recites, *inter alia*, a "subscriber unit that supports communications with a base station in a CDMA wireless communication system, the subscriber unit comprising: . . . the subscriber unit decoding and processing a power control signal to extract a first power control/inhibit bit stream that corresponds to a first reverse link common channel, the power control signal comprising: a first power control/inhibit bit stream that corresponds to a first reverse link common channel; and a second power control/inhibit bit stream that corresponds to a second reverse link common channel, the second power control/inhibit bit stream offset in relation to the first power control/inhibit bit stream."

Applicant's Independent claim 46 recites, *inter alia*, a "method for transmitting power control bits from a base station to a plurality of subscriber units in a code division multiple access wireless communication system . . . the method comprising: determining a plurality of power control bits, each power control bit corresponding to a respective reverse link common channel of the plurality of reverse link common channels and directing a respective subscriber unit to adjust its reverse link transmission power;

determining a plurality of inhibit bits, each of the plurality of inhibit bits corresponding to a respective reverse link common channel of the plurality of reverse link common channels and indicating whether a dedicated burst mode has been scheduled for the reverse link common channel; assembling the plurality of power control bits and the plurality of inhibit bits into a common bit stream; and transmitting the common bit stream to the plurality of subscriber units."

Applicant's Independent Claim 49 recites, *inter alia*, a "method for transmitting power control bits from a base station to a plurality of subscriber units in a code division multiple access wireless communication system, the common power control bits causing the subscriber units to manage their reverse link transmissions on a plurality of reverse link common channels, the method comprising: determining a first power control/inhibit bit stream that corresponds to a first reverse link common channel; determining a second power control/inhibit bit stream that corresponds to a second reverse link common channel; combining the first power control/inhibit bit stream with the second power control/inhibit bit stream into a common bit stream such that the second power control/inhibit bit stream is offset in relation to the first power control/inhibit bit stream; and transmitting the combined bit stream on a forward link channel."

Applicant respectfully submits that a *prima facie* showing of obviousness has not been made because the hypothetical combination of the combined answer/power control signals of Tsunehara with the collision avoidance of Diachina do not provide a suggestion or motivation for the proposed combination, nor provide any suggestion or motivation to achieve Applicant's invention as set out by the claims. Further, the hypothetical combination of the combined answer/power control signals of Tsunehara with the collision avoidance of Diachina does not teach or disclose all of Applicant's claim limitations.

Claims 19 and 20 are dependent upon claim 18. Claims 22-29 are dependent upon claim 21. Claims 35-42 are dependent upon claim 34. Claims 47 and 48 are dependent upon claim 46. Claims 50-57 are dependent upon claim 49. Applicant respectfully submits that these dependent claims introduce additional patentable subject

matter, and submits the reasons that distinguish claim 18, 21, 33,34 and 46 over the present rejection are applicable in distinguishing claims 19, 20, 22-29, 35-42, 47, 48 and 50-57 over the same rejection.

3. Allowable Subject Matter

Claims 26-29, 39-42 and 54-57 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant notes with appreciation this indication of allowability.

CONCLUSION

The Applicant respectfully submits that Claims 18-29, 33-42 and 46-57 in the Application are in condition for allowance, and respectfully requests allowance of such Claims.

No additional fees are believed to be due. In the event that additional fees are due or a credit for an overpayment is due, the Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Garlick Harrison & Markison Deposit Account No. 50-2126.

The Examiner is invited to contact the undersigned by telephone, facsimile, or email if the Examiner believes that such a communication would advance the prosecution of the present invention.

RESPECTFULLY SUBMITTED,
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